Claims

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1. A method of lining a storage tank comprising the steps of: -

providing a keying means on the inner surface of the tank;

applying a corrosion barrier coating to the keying means;

applying an interstitial grid to the tank;

laying up a pliable glass reinforced plastics material onto the grid; and

exposing the glass reinforced plastics material to ultra violet rays to cure the material and form a hardened inner liner shell for the tank.

2. A method as claimed in claim 1 wherein the interstitial grid is provided by pre-formed sheets of flexible material.

3. A method as claimed in claim 1 wherein the grid is adhesively bonded to the corrosion barrier coating.

4. A method as claimed in claim 1 wherein the grid has a facing material applied to receive the glass reinforced plastics material.

5. A method as claimed in claim 4 wherein the facing is a polyester mat bonded to one side of the grid.

6. A method as claimed in claim 1 wherein at least portion of the grid is of a plastics material.

7. A method as claimed in claim 1 wherein at least portion of the grid is of a composite material.

8. A method as claimed in claim 1 wherein at least portion of the grid is of a mesh material.

9. A method as claimed in claim 8 wherein the mesh is a metal mesh.

10. A method as claimed in claim 9 wherein the mesh is an aluminium mesh.

11. A method as claimed in claim 6 wherein the grid is of high density polyethylene material.

12. A method as claimed in claim 1 wherein, for lining, the tank is divided into a number of zones, which are separately lined.

13. A method as claimed in claim 12 wherein the final zone to be lined is adjacent a manway into the tank.

14. A method as claimed in claim 2 wherein the sheets of pliable glass reinforced plastics material applied to the grid in section, the marginal edges of the sections being butt jointed.

15. A method as claimed in claim 14 wherein the joints between adjacent sheets are covered with a GRP tape.

16. A method as claimed in claim 1 including the step of: -

applying a coating to the hardened GRP liner.

17. A method as claimed in claim 1 wherein the keying means is provided by grit blasting the inner surface of the tank.

18. A method as claimed in claim 1 including the step of: -

cleaning the inner surface of the tank prior to providing the keying means.

19. A method as claimed in claim 18 wherein the inner surface is cleaned by water jet cleaning.

20. A method as claimed in claim 1 wherein the corrosion barrier is a glassflake epoxy resin.

21. A method as claimed in claim 20 wherein the corrosion barrier layer is applied to a dry film thickness of greater than 1000 microns.

22. A method as claimed in claim 1 including the steps, prior to application of a corrosion layer of: -

inspecting the internal wall of the tank; and

repairing any imperfections in the tank wall.

23. A method as claimed in claim 1 wherein the GRP is exposed to UV by directing UV lamps at the GRP layer.

24. A method as claimed in claim 1 wherein the GRP material is covered with an outer protective film which is removed to expose the GRP material to UV.

25. A method as claimed in claim 1 wherein the GRP coating is a glassflake epoxy resin.

26. A method as claimed in claim 1 wherein the tank is an underground liquid storage tank.

27. A tank whenever lined by a method as claimed in claim 1.

28. A tank as claimed in claim 27 having a tank wall, keying means on the inner surface of the tank wall, a corrosion barrier coating applied to the keying means, an interstitial grid applied to the tank, UV cured glass fibre reinforced material laid onto the grid forming a hardened inner liner shell for the tank.

29. A tank as claimed in claim 27 including a leak monitoring transducer in the interstitial space defined by the grid.

30. A tank as claimed in claim 27 including a vapour monitoring means in the interstitial space defined by the grid.

31. A tank as claimed in claim 30 wherein the vapour monitoring means includes a vapour sampling tube.

32. A tank as claimed in claim 29 including an alarm means associated with the monitoring means.

33. A tank as claimed in claim 32 wherein the alarm is mounted remote from the tank.

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